

09/8079119
5000

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 October 2001 (04.10.2001)

PCT

(10) International Publication Number
WO 01/72959 A3

- (51) International Patent Classification?: **C12N 15/14**, 15/16, 15/17, 15/20, 15/21, 15/31, 15/32, 15/62, 15/82, C12P 21/02, A01H 5/00
- (74) Agents: **WEISER, Gerard, J.** et al.; 1600 Market Street, Suite 3600, Philadelphia, PA 19103-7286 (US).
- (21) International Application Number: PCT/US01/06288
- (22) International Filing Date: 28 February 2001 (28.02.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- | | | |
|---------------|-------------------------------|----|
| 60/185,987 | 1 March 2000 (01.03.2000) | US |
| 60/263,424 | 23 January 2001 (23.01.2001) | US |
| 60/263,473 | 23 January 2001 (23.01.2001) | US |
| 60/263,668 | 23 January 2001 (23.01.2001) | US |
| Not furnished | 23 February 2001 (23.02.2001) | US |
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicants (*for all designated States except US*): **AUBURN UNIVERSITY** [US/US]; 309 Samford Hall, Auburn University, AL 36849 (US). **UNIVERSITY OF CENTRAL FLORIDA** [US/US]; 4000 Central Florida Blvd., Orlando, FL 32816 (US).
- Published:
— with international search report
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): **DANIELL, Henry** [US/US]; 1255 Marina Point #315, Casselberry, FL 32707 (US).
- (88) Date of publication of the international search report:
10 May 2002
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PLASTID TRANSFORMATION VECTORS FOR EXPRESSING HUMAN PROTEINS IN PLANTS

(57) Abstract: Plastid transformation vectors are described that encode a variety of biopharmaceutical proteins, including proinsulin and proinsulin fusion proteins, interferon, growth factors, cholera toxin, and human serum albumin. Vectors are also described that encode GVGVP polymers, Cry2aA2, and chaperonins.

WO 01/72959 A3